

Diversity and distribution of *Aptodrilus*, *Glossodrilus*, *Onoreodrilus* and *Righiodrilus* (Annelida, Clitellata, Lumbricina, Glossoscolecidae) in South America^{1*}

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Abstract

A catalogue of 87 species and subspecies of terrestrial megadrile Glossoscolecidae from South America, belonging to *Aptodrilus* (11 taxa), *Glossodrilus* (48 taxa), *Onoreodrilus* (5 taxa), and *Righiodrilus* (23 taxa), is presented. Gilberto Righi described 39 of these taxa, predominantly from Brazil, while Andras Zicsi described another 34 taxa, mainly from Ecuador. These genera represent tropical groups of South American endemic species, with the exception of only two species (*Glossodrilus nemoralis* and *G. peregrinus*), also found in Central America and the Caribbean. Full synonyms and detailed South American occurrences are provided.

KEY WORDS: biodiversity, earthworms, Glossoscolecoida, Neotropical region.

Resumo

DIVERSIDADE E DISTRIBUIÇÃO DE *APTODRILUS*, *GLOSSODRILUS*, *ONOREODRILUS* E *RIGHIODRILUS* (ANNELIDA, CLITELLATA, LUMBRICINA, GLOSSOSCOLECIDAE) NA AMÉRICA DO SUL. Um catálogo de 87 espécies e subespécies de minhocas terrestres da América do Sul, pertencentes aos gêneros *Aptodrilus* (11 táxons), *Glossodrilus* (48 táxons), *Onoreodrilus* (5 táxons) e *Righiodrilus* (23 táxons), é apresentado. Gilberto Righi descreveu 39 destes táxons, predominantemente do Brasil, enquanto Andrés Zicsi descreveu outros 34 táxons, predominantemente do Equador. Estes gêneros representam grupos tropicais de espécies endêmicas, com apenas duas espécies (*Glossodrilus nemoralis* e *G. peregrinus*), encontradas também no Caribe e na América Central. São fornecidas sinônimas completas e ocorrências detalhadas na América do Sul para cada táxon.

PALAVRAS-CHAVE: biodiversidade, Glossoscolecoida, minhocas, região Neotropical.

Introduction

Progress in our knowledge of glossoscolecids in South America must begin by cataloguing our present knowledge of this very diverse and highly endemic family in the Neotropical region. Published data are scattered in numerous small publications in diverse languages, and would become more useful and accessible if compiled into a single English publication.

In this paper I provide a catalogue of the species and subspecies of *Aptodrilus*, *Glossodrilus*, *Onoreodrilus* and *Righiodrilus* cited to date from the South American continent. Frago & Brown (2007) recently listed a total of 94 species for these genera in Latin America.

The four genera share 8 pairs of chaetae per segment, disposed in longitudinal series, have one pair of intracitellar male pores, and are metandric and metagynic (Righi, 1990; Zicsi, 1990, 1995, 1997). It is difficult to decide at our present state of knowledge if any of these characters may be apomorphic.

Glossodrilus + *Righiodrilus* appear to share a unique pair of compound calciferous glands on segment 11, *Righiodrilus* differing further by the presence of membranes in these calciferous glands (Zicsi, 1995) and *Glossodrilus* by having tubular calciferous glands which have (always?) a reservoir (Righi, 1990).

On the other hand, *Aptodrilus* and *Onoreodrilus* share the presence of 5 pairs of lateral oesophageal calciferous glands on segments 10-14 (Zicsi, 1990, 1997).

Hopefully this effort will serve as a starting point for ecologists and taxonomists to further sample these endemic South American genera, study species interrelationships, and promote efforts to protect the endangered habitats in which endemic species may still be found. Compiling the available information on the biodiversity and distribution of a neglected zoological group in a megadiverse and only cursorily sampled continent remains a priority for those interested in biodiversity studies and conservation biology.

¹I dedicate this paper to the memory of Gilberto Righi.

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Material and methods

I have used 3-letter abbreviations for South American countries (ARG, Argentina; BOL, Bolivia; BRA, Brazil; COL, Colombia; ECU, Ecuador; GUY, Guyana; PAR, Paraguay; PER, Peru; VEN, Venezuela) and 2-letter abbreviations for sampled States in Brazil (AM, Amazonas; AP, Amapá; MA, Maranhão; MT, Mato Grosso; PA, Pará; RJ, Rio de Janeiro; RO, Rondônia; RR, Roraima; RS, Rio Grande do Sul; SP, São Paulo).

Results

Species marked with an asterisk (*) are previously only reported from South America. Distr. = Distribution; Syn. = Synonymy.

LUMBRICINA De Blainville, 1830

Syn: Terricolae Örsted, 1850; Megadrili Benham, 1890; Diplosteticolata Yamaguchi, 1953; Crassiclitellata Jamieson, 1988

GLOSSOSCOLECOIDEA Michaelsen, 1900

GLOSSOSCOLECIDAE Michaelsen, 1900

Glossodrilus genus-group

Aptodrilus Cognetti, 1904

Type: *A. excelsus* Cognetti, 1904

Syn: *Rhinodrilus* (*Aptodrilus*) Cognetti, 1904

1*. *A. baloghi* (Zicsi & Csuzdi, 1988)

Syn: *Thamnodrilus baloghi* Zicsi & Csuzdi, 1988; *Glossodrilus baloghi* (Zicsi & Csuzdi, 1988: 212).

Distr: ECU: Cotopaxi Prov: San Francisco de las Pampas; near Quito and Santo Domingo; Pichincha Prov: Saloya; 32 km from Selva Alegre (Zicsi & Csuzdi, 1988: 214); Napo Prov: Puerto Misahuali; Patata Prov: Puyo; Cañar Prov; Azuay Prov; Imbabura Prov. (Zicsi, 1988a: 318); Sucumbios Prov. (Zicsi, 1997: 158).

2*. *A. botari* (Zicsi & Csuzdi, 1988)

Syn: *Thamnodrilus botari* Zicsi & Csuzdi, 1988.

Distr: ECU: Chimborazo Prov. (Zicsi & Csuzdi, 1988: 214); Cotopaxi Prov: Carchi: Chiles volcano (Zicsi, 1997: 166).

3*. *A. chilensis* Zicsi, 1997

Distr: ECU: Carchi Prov: Chiles volcano (Zicsi, 1997: 166).

4*. *A. excelsus* (Cognetti, 1904)

Syn: *Glossodrilus excelsus* Cognetti, 1904; *Rhinodrilus* (*Aptodrilus*) *excelsus* (Cognetti, 1904); *Thamnodrilus excelsus* (Cognetti, 1904); *Andioscolex excelsus* (Cognetti, 1904).

Distr: ECU: Azuay Prov: Cuenca and Gualaceo; Cañar Prov: Paredones (Cognetti, 1904: 15); Chimborazo Prov; Cotopaxi Prov; Pichincha Prov: near Quito and Santo Domingo (Zicsi & Csuzdi, 1988: 216); Carchi Prov; Cotopaxi Prov; Tungurahua Prov; Boliva Prov; Chimborazo Prov. (Zicsi, 1995: 101).

5*. *A. fuhrmanni* Michaelsen, 1913

Previous name: *Thamnodrilus fuhrmanni* (Michaelsen, 1913).

Syn: *Rhinodrilus* (*Aptodrilus*) *uncinatus* var. Michaelsen, 1913.

Distr: ECU: Pichincha Prov: near Quito and Santo Domingo; Cotopaxi Prov: San Francisco de las Pampas, Ebenda, and Maranchito; Chimborazo Prov: Pohaluin, San Juan Triglona, and close to Juan de Valesco, Wiese, and Paramo; Bolivas Prov: Las 4-Esquinas; Bolivar Prov: Cashca Totoraz (Zicsi & Csuzdi, 1988: 212); Napo Prov. (Zicsi, 1997: 167). COL: Finca Camelia, near Titribi (Michaelsen, 1914: 204); Cauca valley (Zicsi, 1997: 167); Valle Dep: Palmira (Feijoo, 1993; 2007); Antioquia Dep: Angelopolis, to the south of Medellin (Michaelsen, 1918: 159).

6*. *A. griseus* Zicsi, 1997

Distr: ECU: Bolívar Prov: Cascha-Totóras (Zicsi, 1997: 162).

7*. *A. lacteus* Zicsi, 1997

Distr: ECU: Cañar Prov; Cotopaxi Prov. (Zicsi, 1997: 159).

8*. *A. locksai* Zicsi, 1997

Syn: *Glossodrilus locksai* (Zicsi, 1989).

Distr: ECU: Pichincha Prov: Loa; Imbabura Prov. (Zicsi, 1997: 163); Tungurahua Prov: Pilaguin; Chimborazo Prov: Juan de Valesco; Chimborazo; Cotopaxi Prov: Pujili; Cotopaxi (Zicsi, 1989: 172).

9*. *A. ruidus* Cognetti, 1904

Syn: *Thamnodrilus ruidus* (Cognetti, 1904).

Distr: ECU: Carchi Prov: Tulcan (Cognetti, 1904: 16).

10*. *A. tandajapaensis* Zicsi, 1997

Distr: ECU: Pichincha Prov: Tandajapa (Zicsi, 1997: 160).

11*. *A. uncinatus* (Michaelsen, 1910)

Syn: *Rhinodrilus* (*Aptodrilus*) *uncinatus* Michaelsen, 1910; *Thamnodrilus uncinatus* (Michaelsen, 1910); ?*Rhinodrilus* (*Aptodrilus*) *uncinatus* var. Michaelsen, 1913.

Distr: ECU (Michaelsen, 1910: 135); Cotopaxi Prov; Pichincha Prov; Chimborazo Prov. (Zicsi & Csuzdi, 1988:

218); Carchi Prov; Imbabura Prov; Sucumbios Prov. (Zicsi, 1997: 166). COL: Valle Dep: Palmira (Feijoo, 2008).

Glossodrilus Cognetti, 1905

Type: *G. parvus* Cognetti, 1905

Syn: *Andioscolex* Michaelsen, 1927 (Type: *Tykonus peregrinus* Michaelsen, 1897); *G. (Tonperogé)* Righi & Ayres, 1975 (Type: *G. parecis* Righi & Ayres, 1975)

12*. *G. antisanae* Zicsi, 1989

Distr: ECU: Pichincha Prov: Antisana; Nono; Pifo; Papallacta; Paschoa National Park (Zicsi, 1989: 181); Cotopaxi Prov. (Zicsi, 1995: 94).

13*. *G. antunesi* (Righi, 1971)

Syn: *Andioscolex antunesi* Righi, 1971; *G. bainca* Hamoui & Donatelli, 1983.

Distr: BRA: MA: Caxias Mun: margin of Brocos lake (Righi, 1972: 161); AP: Serra do Navio; Capivara waterfall; middle Amaparí river (Righi, 1971: 58); RR (Hamoui & Donatelli, 1983: 143); Maracá island; Bonfim (Righi, 1991: 392).

14*. *G. baloghi* Zicsi, 1998

Distr: ECU: Napo Prov: Puerto Misahuali; Pastaza Prov: Cañar Prov; Azuay Prov. (Zicsi, 1995: 96).

15*. *G. benavidesi* Zicsi, 1989

Distr: ECU: Imbabura Prov: Otavalo; Cotopaxi Prov: Pujili (Zicsi, 1989: 168).

16*. *G. bresslaui* (Michaelsen, 1918)

Syn: *Glossoscolex bresslaui* Michaelsen, 1918; *Andioscolex bresslaui* (Michaelsen, 1918).

Distr: BRA: SP: Cananéia: Cananéia-Pariqueraçu highway, km 19 (Righi, 1974: 555); RJ: Guanabara Bay: Barreira (Michaelsen, 1918: 295).

17*. *G. chami* Righi, 1996

Distr: COL: Risaralda Dep: Pereira (Righi, 1996: 591); Los Nevados Park (Righi & Van der Hammen, 1995: 479).

18*. *G. chimborazoï* Zicsi, 1989

Distr: ECU: Chimborazo Prov: Chimborazo (Zicsi, 1989: 186); Tungurahua Prov. (Zicsi, 1995: 102).

19*. *G. cornutus* Righi & Molina, 1994

Distr: VEN: Barinas State: Ticoporo forestal reserve (Righi & Molina, 1994: 307).

20*. *G. crucifer* Righi & Römbke, 1987

Distr: PER: Loreto Prov: Panguana ecological station. ECU: Pichincha Prov; Cotopaxi Prov. (Righi & Römbke, 1987: 532); Tungurahua Prov. (Zicsi, 1995: 102).

21*. *G. dudichi* Zicsi, 1995

Distr: ECU: Pichincha Prov. (Zicsi, 1995: 98).

22*. *G. excelsus* (Cognetti, 1904)

Syn: *Glossoscolex excelsus* Cognetti, 1904.

Distr: ECU: Azuay Prov: Cuenca; Cañar Prov: Gualaceo; Paredones (Cognetti, 1904: 16); Bolivar Prov; Chimborazo Prov. (Zicsi, 1995: 100).

23*. *G. fragilis* Zicsi, 1989

Syn: *G. crucifer* subsp. *fragilis* Zicsi, 1989.

Distr: ECU: Pichincha Prov: Pichincha; Paschoa National Park; Chimborazo Prov: Chimborazo (Zicsi, 1989: 178); Imbabura Prov; Tungurahua Prov; Loja Prov. (Zicsi, 1995: 102).

24*. *G. griseus* Zicsi & Feijoo, 1994

Distr: COL: Valle Dep: Palmira (Feijoo, 1993; 2007); El Cerrito: Páramo de Los Dominguez; Florida: Páramo de Tinajes (Zicsi & Feijoo, 1994: 55).

25*. *G. hondaensis* (Michaelsen, 1900)

Syn: *Geoscolex hondaensis* Michaelsen, 1900; *Andioscolex hondaensis* (Michaelsen, 1900); *Glossoscolex hondaensis* (Michaelsen, 1900).

Distr: COL: Tolima Dep: Honda (Michaelsen, 1900: 262).

26*. *G. kalmari* Zicsi, 1995

Distr: ECU: Tungurahua Prov; Pastaza Prov; Cañar Prov; Azuay Prov. (Zicsi, 1995: 101).

27*. *G. kaszabi* Zicsi, 1988

Distr: ECU: Napo Prov; Pastaza Prov: Puyo (Zicsi, 1988a: 314).

28*. *G. kuna* Righi, 1995

Distr: COL: Tolima Dep: Los Nevados park: Santa Isabel (Righi, 1995: 588).

29*. *G. lacteus* Zicsi & Feijoo, 1994

Distr: COL: Valle Dep: Toche Palmira (Feijoo, 1993; Zicsi & Feijoo, 1994: 56).

30*. *G. landeszi* Zicsi, 1988

Distr: ECU: Pichincha Prov; Cotopaxi Prov: Pujili; Pueblo Quemado; Azuay Prov; Zamora Prov. (Zicsi, 1988a: 316; 1995: 87).

- 31*. *G. loksai* Zicsi, 1989
Distr: ECU: Tungurahuai Prov: Pilaguin; Camborazo Prov: Juan de Valisco; Cotopaxi Prov: Pujili (Zicsi, 1989: 172).
- 32*. *G. lojanus* (Michaelsen, 1918)
Syn: *Glossoscolex lojanus* Michaelsen, 1918; *Glossoscolex (G.) lojanus* Michaelsen, 1918.
Distr: ECU: Loja Prov. (Michaelsen, 1918: 1).
- 33*. *G. lopezae* Zicsi, 1995
Distr: ECU: Imbabura Prov. (Zicsi, 1995: 97).
- 34*. *G. mahnerti* Zicsi, 1989
Distr: ECU: Pichincha Prov: Antisana; Sierra Pichincha; Pasachoa National Park; Chimborazo Prov: Chimborazo (Zicsi, 1989: 176); Cotopaxi Prov; Tungurahua Prov. (Zicsi, 1995: 85).
- 35*. *G. marabora* Righi, 1984
Distr: VEN (Paoletti, 1989: 435): Distrito Federal: El Avila National Park: El Avila cliff (Righi, 1984a: 248).
- 36*. *G. meridionalis* (Cognetti, 1904)
Syn: *Glossoscolex perrieri* subsp. *meridionalis* Cognetti, 1904; *Andioscolex perrieri meridionalis* (Cognetti, 1904).
Distr: ECU: Azuay Prov: Cuenca (Cognetti, 1904: 17).
- 37*. *G. motu* Righi, 1991
Distr: BRA: RR: Maracá Ecological Station (Righi, 1991: 394).
38. *G. nemoralis* (Cognetti, 1905)
Syn: *Glossoscolex nemoralis* Cognetti, 1905; *Andioscolex nemoralis* (Cognetti, 1905).
Distr: ECU: Paschoa National Park; Pichincha Prov; Imbabura Prov; Carchi Prov; Cotopaxi Prov; Tungurahua Prov. (Zicsi, 1995: 101).
Further Distr: Central America (Righi, 1996: 578; Brown & Fragoso, 2007: 424).
- 39*. *G. paez* Righi, 1995
Distr: COL: Tolima Dep: Los Nevados park: Santa Isabel (Righi, 1995: 593).
- 40*. *G. palenke* Righi, 1995
Distr: COL: Los Nevados park: Risaralda Dep: Pereira; Santa Rosa de Cabal; Tolima Dep: Santa Isabel (Righi, 1995: 582).
- 41*. *G. pan* Righi, 1984
Distr: COL: Magdalena Dep: Sierra Nevada de Santa Marta (Righi, 1984b: 465).
- 42*. *G. panikita* Righi, 1995
Distr: COL: Los Nevados park: Valle Dep: Cartago (Righi, 1995: 595).
- 43*. *G. papillatus* Zicsi, 1989
Distr: ECU: Pichincha Prov: Sierra Pichincha; Sierra Antisana (Zicsi, 1989: 171).
- 44*. *G. paralojanus* Zicsi, 1995
Distr: ECU: Loja Prov: Hacienda El Cortijo (Zicsi, 1995: 89).
- 45*. *G. paraloksai* Zicsi, 1995: 953
Distr: ECU: Cotopaxi Prov. (Zicsi, 1995: 95).
- 46*. *G. parecis* Righi & Ayres, 1975
Syn: *G. (Tonperoge) parecis* Righi & Ayres, 1975; *Glossoscolex minutus* nom. nud., probably = *Glossodrilus parecis* (De Mischis & Righi, 1999: 64).
Distr: ARG: Santa Fé Prov. (Ljungström et al., 1973: 240); Córdoba Prov: Sierras Chicas (De Mischis, 1999: 24); Ceballos river (De Mischis & Righi, 1999: 64). BRA: RS: Serra do Mar: Parecis (Righi & Ayres, 1975: 314); RJ: Seropédica (Righi, 1980: 242).
- 47*. *G. peregrinoides* Zicsi, 1995
Distr: ECU: Carchi Prov: El Angel; Las Juntas (Zicsi, 1995: 92).
48. *G. peregrinus* (Michaelsen, 1897)
Syn: *Tykonos peregrinus* Michaelsen, 1897; *Glossoscolex peregrinus* (Michaelsen, 1897); *Andioscolex peregrinus* (Michaelsen, 1897).
Distr: BOL: Targa Dep: Gran Chaco Prov: Aguiarenda (Cognetti, 1902: 9).
Further Distr: Caribbean islands (Michaelsen, 1897: 376).
- 49*. *G. perrieri* (Cognetti, 1904)
Syn: *Glossoscolex perrieri* Cognetti, 1904; *Glossoscolex perrieri perrieri* Cognetti, 1904; *Andioscolex perrieri perrieri* (Cognetti, 1904); *Glossodrilus perrieri perrieri* Cognetti, 1904.
Distr: PAR: Asunción (Zicsi & Csuzdi, 1987: 269). ECU: Azuay Prov: Lloa (Cognetti, 1904: 17); Cotopaxi Prov; Pichincha Prov. (Zicsi, 1989: 167); Napo Prov. (Zicsi, 1995: 84).
- 50*. *G. pixao* Righi & Garcia, 1989

Distr: COL: Páramo de Monteserrate (Righi & Garcia, 1989: 418); Cundinamarca Dep: Bogotá: Bogotá (Righi, 1995: 578).

51*. *G. sajja* Righi, 1995

Distr: COL: Tolima Dep: Santa Isabel; Los Nevados park: Risaralda Dep: Santa Rosa de Cabal; Valle Dep: Alcalá (Righi, 1995: 597).

52*. *G. schuetti* (Michaelsen, 1918)

Syn: *Glossoscolex schütti* Michaelsen, 1918; *Andioscolex schuetti* (Michaelsen, 1918).

Distr: COL: Cauca Valley Dep: Palmira (Michaelsen, 1918: 290).

53*. *G. seidlai* Zicsi, 1989

Distr: ECU: Pichincha Prov: San Jose de Minas; Imbabura Prov: Otavalo (Zicsi, 1989: 174).

54*. *G. terranae* Zicsi, 1989

Distr: ECU: Tungurahua Prov: Arenales; Bolívar Prov: Las 4-esquinas; Chimborazo Prov: Chimborazo (Zicsi, 1989: 184).

55*. *G. totaritoensis* Righi, 1995

Distr: COL: Los Nevados park: Tolima Dep: Santa Isabel (Righi, 1995: 596).

56*. *G. tuberculatus* Zicsi, 1989

Distr: ECU: Pichincha Prov: Santo Domingo; Cotopaxi Prov; Loja Prov. (Zicsi, 1989: 182).

57*. *G. tulcanus* Zicsi, 1995

Distr: ECU: Carchi Prov; Napo Prov. (Zicsi, 1995: 93).

58*. *G. unguis* Righi, 1995

Distr: COL: Los Nevados park: Tolima Dep: Venadillo (Righi, 1995: 584).

59*. *G. yuko* Righi, 1995

Distr: COL: Valle Del Cauca Dep: Argelia (Righi, 1995: 586).

Onoreodrilus Zicsi, 1987

Type: *Aptodrilus festae* Cognetti, 1904

60*. *O. benavidesi* Zicsi, 1987

Distr: ECU: Pichincha Prov: Quito; Cotopaxi Prov: San Francisco de las Pampas (Zicsi, 1987: 60); Asuay Prov. (Zicsi, 1990: 151). COL: Cauca Dep: Caldono; El Cerrito (Zicsi & Feijoo, 1994: 55); Valle Dep: Palmira (Feijoo, 1993; 2008).

61*. *O. botariorum* Zicsi, 1987

Distr: ECU: Pichincha Prov: Quito (Zicsi, 1987: 58); Imbabura Prov: Napo (Zicsi, 1990: 154).

62*. *O. devriesiorum* Zicsi, 1990

Distr: ECU: Pichincha Prov. (Zicsi, 1990: 152).

63*. *O. festae* (Cognetti, 1904)

Syn: *Aptodrilus festae* Cognetti, 1904; *Thamnodrilus festae* (Cognetti, 1904).

Distr: ECU: Pichincha Prov: Peripa river forest (Cognetti, 1904: 15); Quito; Santo Domingo (Zicsi, 1988b: 59); Chimborazo Prov: Juan de Velasco (Zicsi, 1990: 150).

64*. *O. loksai* Zicsi, 1987

Distr: ECU: Cotopaxi Prov: San Francisco de las Pampas (Zicsi, 1987: 61); Imbabura Prov. (Zicsi, 1990: 154). COL: Valle Del Cauca Dep: Palmira (Feijoo, 1993; 2008; Zicsi & Feijoo, 1994: 59).

Righiodrilus Zicsi, 1995

Type: *Glossodrilus tico* Righi, 1982

65*. *R. aioca* (Righi, 1975)

Syn: *Glossodrilus aioca* Righi, 1975

Distr: BRA: AP: Serra do Navio (Righi, 1975: 87).

66*. *R. amazonius* Zicsi & Csuzdi, 1999

Distr: BRA: PA: east of Belém: Capitão Poço (Zicsi & Csuzdi, 1999: 131).

67*. *R. arapaco* (Righi, 1982)

Syn: *Glossodrilus arapaco* Righi, 1982.

Distr: BRA: RR: Maracá island: Uraricoera river, near Maracá channel (Righi, 1982a: 58).

68*. *R. cigges* (Righi, 1970)

Syn: *Andioscolex cigges* Righi, 1990; *Glossodrilus cigges* (Righi, 1970).

Distr: BRA: AP: Serra do Navio: Amapari river (Righi, 1988a: 337).

69*. *R. dithecae* (Righi, 1988)

Syn: *Glossodrilus uete dithecae* Righi, 1988; *R. uete dithecae* (Righi, 1988); *Glossodrilus dithecae* Righi, 1988.

Distr: BRA: AP: Matapi river mouth (Righi, 1988a: 339).

70*. *R. fontebonensis* (Righi, 1988)

Syn: *Glossodrilus fontebonensis* Righi, 1988.

Distr: BRA: AM: Fonte Boa (Righi, 1988a: 341).

- 71*. *R. freitasi* (Righi, 1971)
 Syn: *Andioscolex freitasi* Righi, 1971; *Glossodrilus freitasi* (Righi, 1971).
 Distr: BRA: AP: Serra do Navio: Capivara waterfall: Upper Amaparí river (Righi, 1971: 60).
- 72*. *R. guabibo* (Righi & Molina, 1994)
 Syn: *Glossodrilus guabibo* Righi & Molina, 1994
 Distr: VEN: Barinas State: Ticoporo forestal reserve (Righi & Molina, 1994: 306).
- 73*. *R. itajo* (Righi, 1971)
 Syn: *Andioscolex itajo* Righi, 1971; *Glossodrilus itajo* (Righi, 1971).
 Distr: BRA: SP: Araras: Araras- Rio Claro highway, km 3 (Righi, 1971: 63).
- 74*. *R. mairaro* (Righi, 1982)
 Syn: *Glossodrilus mairaro* Righi, 1982.
 Distr: BRA: RR: Boa Vista-Bonfim highway, km 90 (Righi, 1982a: 58).
- 75*. *R. marcusae* (Righi, 1969)
 Syn: *Andioscolex marcusae* Righi, 1969; *Glossodrilus marcusae* (Righi, 1969).
 Distr: BRA: PA; Marajó island: Taperabá creek (Righi, 1969: 157).
- 76*. *R. mucopois* (Righi, 1970)
 Syn: *Glossodrilus mucopois* Righi, 1970; *Andioscolex mucopois* (Righi, 1970).
 Distr: BRA: AP: Serra do Navio: Capivara waterfall (Righi, 1970: 371).
- 77*. *R. oliveirae* (Righi, 1982)
 Syn: *Glossodrilus oliveirae* Righi, 1982.
 Distr: GUY: Rupununi State: Lethem: Itapocu river margin (Righi, 1982a: 59). BRA: RR: Boa Vista: Rio Branco river margin (Righi, 1982a: 59); Maracá Ecological Station (Righi, 1991: 392).
- 78*. *R. ortonae* (Righi, 1988)
 Syn: *Glossodrilus ortonae* Righi, 1988
 Distr: BRA: PA: Belém: Guamá river (Righi, 1988a: 342).
- 79*. *R. paoletti* (Righi, 1984)
 Syn: *Glossodrilus paoletti* Righi, 1984.
 Distr: VEN (Paoletti, 1989: 435): Aragua State: Henri Pittier National Park: Rancho Grande (Righi, 1984a: 251).
- 80*. *R. schubarti* (Righi, Ayres & Bittencourt, 1978)
 Syn: *Glossodrilus (Glossodrilus) schubarti* Righi, Ayres & Bittencourt, 1978; *Glossodrilus schubarti* Righi, Ayres & Bittencourt, 1978.
 Distr: VEN: Bolivar State: Santa Elena de Uiaem: Borracho river margins (Righi, 1982a: 55). BRA: AM: Novo Airão: Negro river island (Righi et al., 1978: 22).
- 81*. *R. sucunduris* (Righi, Ayres & Bittencourt, 1976)
 Syn: *Glossodrilus (G.) sucunduris* Righi, Ayres & Bittencourt, 1976.
 Distr: BRA: PA: Amazonas-Tapajós National Park (Righi, 1982b: 113); AP: Serra do Navio; AM: Sucurundi: Sucurundi river (Righi et al., 1976: 363); Coari (Righi, 1988a: 338).
- 82*. *R. tico* (Righi, 1982)
 Syn: *Glossodrilus tico* Righi, 1982.
 Distr: ECU: Napo Prov. (Zicsi, 1995: 105). VEN: Bolívar State: San Antonio. GUY (Righi, 1982a: 62). BRA: AM: Tefé; Tabatinga (Righi, 1988a: 338); RR: Maracá Ecological Station: Uraricoera river island, near Maracá channel (Righi, 1982a: 62).
- 83*. *R. tingus* Righi, 1971
 Syn: *Andioscolex tinga* Righi, 1971; *Glossodrilus tinga* (Righi, 1971); *Glossoscolex tinga* (Righi, 1971).
 Distr: ARG: Tucumán (Teisaire & Roldán, 1998: 29). BRA: AP: Serra do Navio: Jazida (Righi, 1971: 64).
- 84*. *R. tocantinensis pola* (Righi, 1984)
 Syn: *Glossodrilus tocantinensis pola* Righi, 1984.
 Distr: BRA: MT: Pontes e Lacerda, near Guaporé river; Vila Bela da Santíssima Trindade (Righi, 1984c: 205).
- 85*. *R. tocantinensis tocantinensis* (Righi, 1972)
 Syn: *Andioscolex tocantinensis* Righi, 1972; *Glossodrilus tocantinensis* (Righi, 1972); *Glossodrilus tocantinensis tocantinensis* (Righi, 1972).
 Distr: BRA: PA: Tocantins river margins: Cametá; Mocajuba (Righi, 1972: 161); Marabá; Geladinho; Pato: Transamazonian highway, km 92; Itupiranga (Righi, 1974: 556).
- 86*. *R. uete* (Righi, 1988)
 Syn: *Glossodrilus uete* Righi, 1988
 Distr: BRA: RO: Mirante da Serra highway, km 32 (Righi, 1988b: 123).
- 87*. *R. venancioi* (Righi, 1982)
 Syn: *Glossodrilus venancioi* Righi, 1982; *Glossodrilus (Tonperog) venancioi* Righi, 1982; *Glossoscolex venancioi* (Righi, 1982).

Distr: PA: Amazônia-Tapajós National Park (Righi, 1982b: 113).

Discussion

Records of taxa in South America belonging to *Aptodrilus*, *Glossodrilus*, *Onoreodrilus* and *Righiodrilus* are scattered in the literature, although Fragoso & Brown (2007) have recently listed 94 described species and subspecies belonging to these genera from Latin America. We are still in the pioneer phase of clitellate investigations in South America, so cataloguing efforts are important if we hope to gain more insight into the biodiversity of this megadiverse continent. Summaries of faunistic knowledge of the less conspicuous South American invertebrates have rarely been attempted before, especially for most groups of non-insect invertebrates.

The glossoscolecids dealt with herein consist of tropical species of South American endemics, with only two species also found in Central America and in the Caribbean. Of the 87 taxa cited for South America, Gilberto Righi described 39, and András Zicsi described 34 taxa. Fragoso & Brown (2007) list an additional 6 species of *Glossodrilus* from Central America (from Panama and from Costa Rica).

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